2009 NHEE Annual Conference

Taking it to the Field: Building Inquiry Outdoors

March 11, 2009 – 8:00 a.m. – 5:00 p.m.

Peabody Mill Environmental Center, Amherst

Keynote Presentation: (11:15-12:00)
Dr. Eleanor Abrams, associate professor at the University of New Hampshire's Department of Education and program coordinator for the Masters of Arts in Environmental Education (MAEE) program

Professional Development Workshops:

Detailed descriptions available on following pages.

Concurrent Session A (9:00–11:00) Field Inquiry Experiences

A1. Carbon Storage in Your Local Forest
Sarah Silverberg, GLOBE Carbon Cycle Project Coordinator, UNH

A2. Seeing the Forest without the Leaves
Karen Bennett, Forester, UNH Cooperative Extension

Concurrent Session B (1:30–2:45)

B1. Is It (Outdoor) Inquiry
Kathleen Neville, Senior Program Naturalist Amoskeag Fishways

B2. Real science, real scientists, real issues: Schoolyard Ecology.
Pamela Snow, Environmental Educator, Harvard Forest

B3. Students as Real Scientists – Analyzing the Data
Jennifer Bourgeault, NCES GLOBE Partnership

Concurrent Session C (3:00–4:15)

C1. Inquiring Minds Head to the Field
Susan Cox, Conservation Education Coordinator, US Forest Service
Judy Silverberg PhD, Wildlife Education Supervisor, NH Fish and Game

C2. "No, We're Not Journaling Again"
Erik Froburg, Leitzel Center, UNH

C3. Elementary GLOBE
Jennifer Bourgeault, NCES GLOBE Partnership

What is inquiry? How can it help my students? How can I incorporate inquiry into my curriculum or programs? "Taking it to the Field: Building Inquiry Outdoors" will provide a venue for formal and nonformal educators to learn about and explore strategies for incorporating inquiry into outdoor lessons and programs, network with fellow EE'ers, and plan for the future!

Wednesday, March 11, 2009
(Snowdate March 12)
Peabody Mill Environmental Center
Amherst, NH

Schedule of Events

8:00	Registration & Silent Auction Begin
8:45	Welcome
9:00	Concurrent Workshop, Session A
11:00	Break
11:15	Keynote Presentation
12:00	Lunch
12:45	Awards and Annual Meeting
1:30	Concurrent Workshop, Session B
2:45	Break
3:00	Concurrent Workshop, Session C
4:15	Networking and Social Hour
5:00	Silent Auction Ends

Silent Auction - Benefits NHEE Programs & Communications

Please contact Audrey Eisenhauer at audrey@reycenter.org or 603-236-3308 if you'd like to contribute an auction item.

Annual Conference Registration and Membership Form - Registration Deadline March 9, 2009

☐ **Workshops, Lunch, Keynote Presentation and One-year NHEE Membership**

☐ $45.00 Student ☐ $85.00 Organization (2 memberships, 1 conference registration)
☐ $60.00 Individual ☐ $115.00 Organization (2 memberships, 2conference registration)

Session A A1 ☐ Carbon Storage A2 ☐ Seeing the Forest
Session B B1 ☐ Is it Inquiry? B2 ☐ Schoolyard Ecology B3 ☐ Analyzing Data
Session C C1 ☐ Inquiring Minds Head C2 ☐ Journaling Again C3 ☐ Elementary GLOBE

☐ **I am unable to attend the annual conference, but would like to renew my membership!**

➔ **Memberships & Membership renewals**…….. ☐ Student $15
(NHEE memberships are due for renewal at the Annual Conference; ☐ Individual $30
All non-members are requested to join NHEE in order to attend the conference.) ☐ Organization $55

(For an Organizational membership 2 people receive benefits. Please include names and contact information for members below.)

➔ **Total Amount Enclosed** *(Make checks payable to NHEE)*……..$_____

☐ I prefer a vegetarian meal.
☐ I am interested in carpooling. I will be traveling from (town)_____. (We will contact you to arrange.)
☐ I will be bringing an item for the silent auction.

Name: _____E-mail address: _____

Mailing Address:_____Organization/School_____

Home Phone: _____Work Phone: _____

Return completed registration form and payment to: NHEE Conference, Jessica Morton, 221Parade Rd, Barnstead, NH 03218
A confirmation and directions to site will be sent to you upon receipt of your registration. Conference questions should be directed to Jessica Morton at jmorton@metrocast.net or 603-509-2789 or 603-706-0291.

Keynote Presentation: *(11:15-12:00)*

Presenter: Dr. Eleanor Abrams, associate professor at the University of New Hampshire's Department of Education and program coordinator for the Masters of Arts in Environmental Education (MAEE) program

The National Association for North American Environmental Educators (NAAEE) has embraced inquiry as one of the most authentic, relevant and effective pathways for children to learn about the natural world. Despite the prominence of inquiry in NAAEE guidelines, how to define it and how to effectively use inquiry-based teaching as an instructional methodology to stimulate student learning remains a mystery to most environmental educators. After years of discussion, writing and ongoing research with the foremost research experts in inquiry, there is not a consensus about what is inquiry but rather a range of definitions encompassing inquiry-based teaching, a view of what inquiry-based teaching looks like in practice and an understanding of the factors that influence the implementation of inquiry in informal and formal classrooms. The unique characteristics of informal settings will be highlighted as a rationale is laid out for what are some of the essential features of inquiry-based teaching and how some form of inquiry can be effectively implemented in every lesson to support your goals for student learning.

Program Descriptions: *Concurrent Session A (9:00-11:00)*

A1: Carbon Storage in Your Local Forest – What is carbon sequestration anyway?

Presenter: Sarah Silverberg, GLOBE Carbon Cycle Project Coordinator, University of New Hampshire

Do trees in your backyard store more or less carbon than the global human population? How will carbon storage change if forested areas are converted to baseball fields, parking lots or houses? Before you can answer these questions you must first know how much carbon is stored in your own backyard or schoolyard. We will begin by examining the concepts students should understand before entering the field, perform an inquiry exercise where you establish basic methods for field data collection, got the field and make measurements, and come back to the classroom for a brief look at data analysis. Come learn how field data collection can bring the global carbon cycle to a local level.

A2: Seeing the Forest without the Leaves

Presenter: Karen Bennett, Forester, UNH Cooperative Extension

Tree identification can be very challenging when our deciduous trees have no leaves- especially when most of us learned only the leaves. Join me for an engaging and inquiring trek into our dormant forest to look at trees in a different light. Learn how to know your trees by looking at twigs, bark, shape and location. Come prepared for the weather as most of the time will be spent outdoors.

Program Descriptions: *Concurrent Session B (1:30 –2:45)*

B1: Is It (Outdoor) Inquiry

Presenter: Kathleen Neville, Senior Program Naturalist Amoskeag Fishways

Many of us regularly lead outdoor activities. But engaging students in hands-on outdoor exploration does not necessarily mean they are engaged in inquiry. Discussion will focus on the inquiry process and how to determine if outdoor lessons are truly inquiry based. Discover some simple ways to "inquiry" your time outdoors.

B2: Real science, real scientists, real issues: Schoolyard Ecology.

Presenter: Pamela Snow, Environmental Educator, Harvard Forest

This is an opportunity for educators to implement authentic ecological field studies in schoolyards or nearby. Research protocols and related educational tools have been developed between professional ecologists and staff at Harvard Forest, and K-12 teachers. Currently over 60 teachers participate in this hands-on program by getting students out to study "Buds, Leaves, and Global Warming", "Water in the Landscape: Vernal Pools", and/or "Woolly Bully; Will the tiny Hemlock Woolly Adelgid mean an end to one of New England's foundation trees?".

B3: Incorporating Non-Fiction Reading with Science

Presenter: Jennifer Bourgeault, NCES NH GLOBE Partnership

In this workshop, we will skip the data collection and use the vast amount of data collected about the environment that are available for free from the GLOBE Program (www.globe.gov). Teachers will begin with already developed activities that use data and then we will discuss how to explore environmental questions and investigate the answers using data from the Internet. Topics in weather, earth system interactions, soil, and hydrology can all be explored, as well as geography (climate) and climate change. The possibilities are endless with these data and your curriculum.

Program Descriptions: *Concurrent Session C (3:00-4:15)*

C1. Inquiring Minds Head to the Field

Presenters: Susan Cox, Conservation Educator State and Private Forestry, US Forest Service and Judy Silverberg PhD, Wildlife Education Supervisor, NH Fish and Game Dept.

Have your students become "real" scientists by studying the outdoors. We will use Field Investigations: Using Outdoor Environments to Foster Student Learning of Scientific Processes, to show how to develop appropriate level field investigations. Questions development, data collection, recording data and data analysis are just some of the skills necessary for field investigations.

C2: "No, We're Not Journaling Again"

Presenter: Erik Froburg, Leitzel Center, University of New Hampshire

Explore how field notebooks can serve as a valuable tool for increasing skills of observation, data collection and self-direction in your students. We will discuss the differences between a traditional nature journal and a field notebook, look at a variety of actual research notebooks and look at some examples of student work. We will also cover the role of field notebooks in a K-12 environment, including their assessment. Depending on group size and time available, we may make some of our own notebook observations.

C3: Elementary GLOBE

Presenter: Jennifer Bourgeault, NCES NH GLOBE Partnership

Elementary GLOBE was designed to introduce K-4 students to the study of Earth System Science (ESS). Elementary GLOBE forms an instructional unit comprised of five modules that address ESS and interrelated subjects including weather, hydrology, seasons, and soils. Each Elementary GLOBE module contains a science based storybook, classroom learning activities and teacher's notes. We will introduce Elementary GLOBE by reading one of the storybooks and carrying out a couple of the activities. This set provides students with a meaningful introduction to technology, a basic understanding of the methods of inquiry, and connection to math and literacy skills.

A Note About Parking

Parking at Peabody Mill Environmental Center is limited. We highly encourage you to carpool with colleagues and friends. If you need assistance arranging a carpool please check the box on the registration form and we will assist you. Offsite parking with shuttle service to Peabody Mill Environmental Center will be available; you will receive details with your conference confirmation.